#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

## WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-009319

Address: 333 Burma Road **Date Inspected:** 22-Sep-2009

City: Oakland, CA 94607

**OSM Arrival Time:** 700 **Project Name:** SAS Superstructure **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Du Zhi Qun, Chen Ying Xin. No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A Yes N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** Tower

### **Summary of Items Observed:**

On this day CALTRANS OSM Quality Assurance (QA) Inspector Umesh Gaikwad was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island in Shanghai, China. QA observed and/or found the following:

Milling Position West Tower Lift 1 diaphragm to C/D corner diagonal plate

This QA inspector performed Magnetic Particle Testing (MT) of approximately 15% and random Visual Testing (VT) of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT reports for this date. The members are identified as Tower Components. The weld designations reviewed are as follows.

WSD1-A115F/J-243

WSD1-A115F/J-242 (VT Reject due to arc strike and spatters)

WSD1-A115G/J-120 (MT Reject due to MT linear indications)

WSD1-A115G/J-121, 236, 237

WSD1-A115H/J-118, 119, 230, 231

WSD1-A115J/J-54, 56 (From 38M to 47.6M)

This Quality Assurance (QA) Inspector observed the following work in progress:

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Bay 10

FCAW welding of weld joint 2A located on SSD1-SPSA3-4.

Welder is identified as 048784. ZPMC QC is identified as Mr. Gong Liang Zhu.

The welding variables recorded by QC appeared to comply with WPS-B-T-2231-Tc-U5-F.

SMAW welding of weld joint 8B located on ED1-A6003-5.

Welder is identified as 053049. ZPMC QC is identified as Mr. Chen Ying Xin.

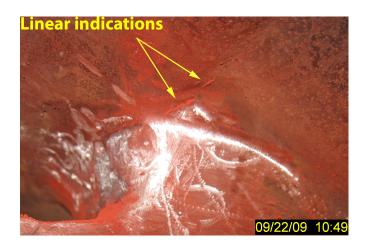
The welding variables recorded by QC appeared to comply with WPS-B-T-3212-Tc-U5b-1.

During random verification Magnetic Particle Testing of weld WSD1-A115G/J-120 of west tower lift 1 diaphragm to C/D corner diagonal plate located in the milling section, Caltrans Quality Assurance (QA) Inspector discovered two linear indications of approximately 12mm and 4mm in length. This area has been previously tested and accepted by ZPMC NDT personnel. (NDT Inspection Notification sheet # 004261)

During random verification Visual Testing (VT) of West tower lift 1 diaphragm to C/D corner diagonal plate, weld WSD1-A115F/J-242 visually unacceptable due to welding spatter and arc strike found at the Inspection area. ZPMC provided the NDT Inspection Notification sheet # 004261 after repair, informing Caltrans QA that they have completed their NDT requirements after repair.

The attached photographs provide additional detail.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



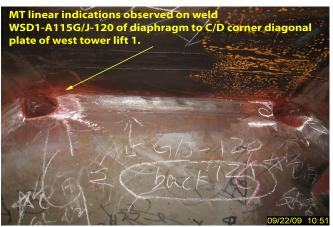


# WELDING INSPECTION REPORT

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# **Summary of Conversations:**

Only general conversation was held between QA and QC concerning this project.

#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Jim Simonis - 134-7246-3441, who represents the Office of Structural Materials for your project.

Inspected By:	Gaikwad,Umesh	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer